

BIOGRAPHICAL SKETCH

NAME: Michael Hughes

POSITION TITLE: Toxicologist

EDUCATION/TRAINING

Institution	Degree	Year	Field of Study
University of Michigan	B.S.	1978	Microbiology
University of Kentucky	M.S.	1983	Toxicology
University of Kentucky	Ph.D.	1986	Toxicology

PROFESSIONAL EXPERIENCE:

5/86-4/90 Postdoctoral/Staff Fellow, Laboratory of Molecular Biophysics, National Institute of Environmental Health Sciences, Research Triangle Park, NC

5/90-3/91 Project Scientist, ManTech Environmental Technology Inc., Research Triangle Park, NC

4/91-12/91 Project Scientist/Supervisor, ManTech Environmental Technology Inc., Research Triangle Park, NC

1/92-12/94 Research Scientist/Supervisor, ManTech Environmental Technology Inc., Research Triangle Park, NC

1/95-Present Research Toxicologist (6/01 – 9/01, Acting Supervisory Toxicologist), Pharmacokinetics Branch, Experimental Toxicology Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC

PROFESSIONAL SOCIETIES:

- Society of Toxicology
- North Carolina Chapter of the Society of Toxicology
- International Society for the Study of Xenobiotics
- American Chemical Society

SELECTED AWARDS AND HONORS:

- U.S. Environmental Protection Agency Scientific and Technological Achievement Award, Level III, 1996, 2006; Honorable Mention, 2006
- Diplomat, American Board of Toxicology, 1990 - present
- ORD Honor Award for Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices (DMA Team OPP Support), 2006
- NHEERL Goal 2 Award: Be a Peaking Performing Organization, 2006
- Experimental Toxicology Division Director's Award for Principal Investigator, 2006
- ORD RTP SHEM Office Recognition of Excellence Award, 2006

INVITED LECTURES/SYMPOSIA:

- "Mechanisms of Arsenic Toxicity", International Workshop on Arsenic Toxicity, University of Queensland, Brisbane, Australia, November 1999.
- "Biomonitoring and Risk Assessment: A Case Study with Inorganic Arsenic",

International Biomonitoring Workshop, Sponsored by ILSI Health and Environmental Sciences Institute, Research Triangle Park, NC, September 2004.

ASSISTANCE/LEADERSHIP PROVIDED TO THE SCIENTIFIC COMMUNITY:

- Secretary/Treasurer, Metals Specialty Section, Society of Toxicology, May 2007 – present
- National Institute of Environmental Health Sciences Special Emphasis Panel for RFP NIH ES-0601, “Absorption, Distribution, Metabolism and Excretion (ADME) Chemical Disposition in Mammals, August, 2006
- ILSI Health and Environmental Sciences Institute Technical Committee on Integration of Biomonitoring Exposure Data into the Risk Assessment Process, 2004 - present.
- Canada Research Chairs Program, College of Reviewers, 2000, 2005
- Pyrethroid Common Mechanism - State of the Science, Planning Committee Member, sponsored by Pyrethroid Working Group, 2005 - 2006
- Examiner, Doctor of Philosophy Thesis, “Carcinogenicity of monomethylarsonous acid (MMA^{III}) and sodium arsenate (As^V) and identification of early warning biomarkers”; Manonmanii Krishnamohan, Ph.D. Candidate, The National Research Centre for Environmental Toxicology, The University of Queensland, Australia, October, 2007

ASSISTANCE/LEADERSHIP PROVIDED TO THE AGENCY:

- Radiation Safety Committee, RTP Campus, U.S. Environmental Protection Agency; Member: 1995-2001; Chairman: 2001- present
- NHEERL Analytical Core Facility Workgroup, 2004-2005

SELECTED PUBLICATIONS: (5 out of a total of 53 publications)

1. Godin, S.J., Scollon, E.J., Hughes, M.F., Potter, P.M., DeVito, M. J., and Ross, M.K. (2006) Species difference in the in vitro metabolism of deltamethrin and esfenvalerate: differential oxidative and hydrolytic metabolism by human and rats. *Drug Metabolism and Disposition* 34:1764-1771.
2. Hughes, M.F. (2006) Biomarkers of exposure: a case study with inorganic arsenic. *Environmental Health Perspectives* 114:1764-1771.
3. Hughes, M.F., Kenyon, E.M. and Kitchin, K.T. (2007) Research approaches to address uncertainties in the risk assessment of arsenic in drinking water. *Toxicology and Applied Pharmacology* 222:399-404.
4. Godin, S.J., Crow, J.A., Scollon, E.J., Hughes, M.F., DeVito, M.J. and Ross, M.K. (2007) Identification of rat and human cytochrome P450s and a rat serum esterase which metabolize deltamethrin and esfenvalerate. *Drug Metabolism and Disposition* 35:1664-1671.
5. Hughes, M.F., Devesa, V., Adair, B.M, Conklin, S.D., Creed, J.T., Styblo, M., Kenyon, E.M. and Thomas, D.J. (2008). Tissue dosimetry, metabolism and excretion of pentavalent and trivalent dimethylated arsenic in mice after oral administration. *Toxicology and Applied Pharmacology* doi:10.1016/j.taap.2007.10.011.